

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

SOLAS OLED LTD.,	§	
	§	
<i>Plaintiff,</i>	§	
	§	
v.	§	CIVIL ACTION NO. 2:19-CV-00152-JRG
	§	
SAMSUNG DISPLAY CO., LTD.,	§	
SAMSUNG ELECTRONICS CO., LTD.,	§	
SAMSUNG ELECTRONICS AMERICA,	§	
INC.,	§	
	§	
<i>Defendants.</i>	§	

SUPPLEMENTAL CLAIM CONSTRUCTION ORDER

Before the Court is Solas’s Brief Regarding Disputed Constructions in the ’450 Patent (Dkt. No. 250) and Defendants’ Supplemental Claim Construction Brief Regarding the Terms “said active elements” and “cover” in Claim 1 of U.S. Patent No. 6,072,450 Patent (Dkt. No. 251). Having considered the briefing and the Parties’ arguments at the Pretrial Conference, the Court is of the opinion that “**said active elements**” does not need construction and that “**cover**” is hereby construed as “**lie over the surface of.**”

I. BACKGROUND

Plaintiff Solas OLED Ltd. (“Solas”) alleges infringement of U.S. Patent No. 6,072,450 (the “’450 Patent”), as well as U.S. Patent Nos. 7,446,338 and 9,256,311. The disputed terms at issue relate only to the ’450 Patent.

Claim 1 of the ’450 Patent recites:

A display apparatus comprising:

- a substrate;
- active elements formed over said substrate and driven by an externally supplied signal;

an insulation film formed over said substrate so as to cover said active elements, said insulation having at least one contact hole;
 at least one first electrode formed on said insulation film so as to cover said active elements, and connected to said active elements through said at least one contact hole, said at least one first electrode being made of a material which shields visible light;
 an organic electroluminescent layer having an organic electroluminescent material formed on said at least one first electrode so as to cover said active elements and including at least one layer which emits light in accordance with a voltage applied to said at least one layer; and
 at least one second electrode formed on said organic electroluminescent layer which covers said active elements.

'450 Patent at 17:50-18:3.

Defendants Samsung Display Co., Ltd., Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. (together, "Samsung") filed a Motion for Summary Judgment of Noninfringement and Invalidity of the '450 Patent (the "Motion"). (Dkt. No. 140). In the Motion, Defendants partially based their noninfringement arguments on assertions that (1) the accused products do not contain a "first electrode that covers said active elements in the display" (*Id.* at 4-13); and (2) Solas did not provide evidence that the alleged electroluminescent layer covers the active elements (*Id.* at 13-17).

Prior to the September 8, 2020 pretrial conference, Solas only briefly raised any claim construction issue, and the issue that was raised was only in response to Samsung's Motion. (*See* Dkt. Nos. 169, 211).

However, at the September 8, 2020 pretrial conference with the Parties, the Court heard argument on Samsung's Motion, and during the hearing, Solas raised the claim construction issue, citing *O2 Micro Intern., Ltd., v. Beyond Innovation Tech., Co.*, 521 F.3d 1351 (Fed. Cir. 2008). In fact, both parties at the September 8, 2020 pretrial conference told the Court they believed additional claim construction in the case was necessary. In response, the Court ordered the Parties to submit supplemental briefing on the claim construction of disputed terms "said active elements"

and “cover,” and heard argument on the construction of said terms at the September 9, 2020 pretrial conference.

II. LEGAL PRINCIPLES

“When the parties raise an actual dispute regarding the proper scope of [patent] claims, the court, not the jury, must resolve that dispute.” *O2 Micro*, 521 F.3d at 1360.

It is understood that “[a] claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using or selling the protected invention.” *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1340 (Fed. Cir. 1999). Claim construction is clearly an issue of law for the court to decide. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970–71 (Fed. Cir. 1995) (en banc), aff’d, 517 U.S. 370 (1996).

“In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). “In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the ‘evidentiary underpinnings’ of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.” *Id.* (citing 517 U.S. 370).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent’s claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary,

which explains the invention and may define terms used in the claims. *Id.* “One purpose for examining the specification is to determine if the patentee has limited the scope of the claims.” *Watts v. XL Sys., Inc.*, 232 F.3d 877, 882 (Fed. Cir. 2000).

Nonetheless, it is the function of the claims, not the specification, to set forth the limits of the patentee’s invention. Otherwise, there would be no need for claims. *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994).

This Court’s claim construction analysis is substantially guided by the Federal Circuit’s decision in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). In *Phillips*, the court set forth several guideposts that courts should follow when construing claims. In particular, the court reiterated that “the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To that end, the words used in a claim are generally given their ordinary and customary meaning. *Id.* The ordinary and customary meaning of a claim term “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1313. This principle of patent law flows naturally from the recognition that inventors are usually persons

who are skilled in the field of the invention and that patents are addressed to, and intended to be read by, others skilled in the particular art. *Id.*

Despite the importance of claim terms, *Phillips* made clear that “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* Although the claims themselves may provide guidance as to the meaning of particular terms, those terms are part of “a fully integrated written instrument.” *Id.* at 1315 (quoting *Markman*, 52 F.3d at 978). Thus, the *Phillips* court emphasized the specification as being the primary basis for construing the claims. *Id.* at 1314–17. As the Supreme Court stated long ago, “in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims.” *Bates v. Coe*, 98 U.S. 31, 38 (1878). In addressing the role of the specification, the *Phillips* court quoted with approval its earlier observations from *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998):

Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

Phillips, 415 F.3d at 1316. Consequently, *Phillips* emphasized the important role the specification plays in the claim construction process.

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the

United States Patent and Trademark Office (“PTO”) understood the patent. *Id.* at 1317. Because the file history, however, “represents an ongoing negotiation between the PTO and the applicant,” it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; see *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that “a patentee’s statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation”).

Phillips rejected any claim construction approach that sacrificed the intrinsic record in favor of extrinsic evidence, such as dictionary definitions or expert testimony. The *en banc* court condemned the suggestion made by *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193 (Fed. Cir. 2002), that a court should discern the ordinary meaning of the claim terms (through dictionaries or otherwise) before resorting to the specification for certain limited purposes. *Phillips*, 415 F.3d at 1319–24. According to *Phillips*, reliance on dictionary definitions at the expense of the specification had the effect of “focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent.” *Id.* at 1321. *Phillips* emphasized that the patent system is based on the proposition that the claims cover only the invented subject matter. *Id.*

Phillips does not preclude all uses of dictionaries in claim construction proceedings. Instead, the court assigned dictionaries a role subordinate to the intrinsic record. In doing so, the court emphasized that claim construction issues are not resolved by any magic formula. The court did not impose any particular sequence of steps for a court to follow when it considers disputed claim language. *Id.* at 1323–25. Rather, *Phillips* held that a court must attach the appropriate

weight to the intrinsic sources offered in support of a proposed claim construction, bearing in mind the general rule that the claims measure the scope of the patent grant.

III. DISPUTED TERMS

A. “said active elements”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“Two or more ‘active elements’”	“Any and all ‘active elements’”

(Dkt. No. 250 at 1-2; Dkt. No. 251 at 1-2).

1. The Parties’ Positions

Independent Claim 1 of the ’450 Patent, off of which asserted Claims 4 and 5 depend, recites:

A display apparatus comprising:

A substrate;

Active elements formed over said substrate and driven by an externally supplied signal;

An insulation film formed over said substrate so as to cover said active elements, said insulation having at least one contact hole; . . .

’450 Patent, 17:50-56.

The parties agreed on a construction at the prior claim construction hearing of “active elements” to mean “circuit elements that have gain or that direct current flow, e.g., transistors.” (Dkt. No. 99 at 7). Notwithstanding the previously construed term, the parties now dispute whether “active elements” must necessarily include all “active elements” in the accused displays, and how this affects subsequent instances of “said active elements.” Plaintiff argues that because the preamble of the claim recites “comprising,” the claim need not encompass every active element in the accused devices. (Dkt. No. 250 at 1). Defendants argue that (1) the active elements are all active elements in the accused display apparatus because the purpose of the invention is to prevent

light from hitting the active elements, and that purpose would be frustrated if some active elements on the device were not included; and (2) all disclosures in the '450 Patent are of embodiments in which all active elements in the display are covered (*see* dispute on “cover,” *infra*). Both sides believe their proposals are consistent with the plain meaning of the claim term.

Plaintiff cites *Gillette Co. v. Energizer Holdings, Inc.* for the proposition that a claim with “comprising” in its preamble is not limited to only the components recited. 405 F.3d 1367, 1371 (Fed. Cir. 2005). In *Gillette*, the Federal Circuit held that a claim directed to a razor that recited “comprising . . . a group of first, second, and third blades” encompassed “razors with more than three blades.” *Id.* In so determining, the Circuit looked to the purpose of the invention and found that the principles of its purpose “could apply equally to four or five blades.” *Id.* The Court determines that even though “[i]t may be that a four-bladed safety razor is a less preferred embodiment, . . . a patentee typically claims broadly enough to cover less preferred embodiments as well as more preferred embodiments, precisely to block competitors from marketing less than optimal versions of the claimed invention.” *Id.* The Federal Circuit found that its interpretation of the claim was confirmed by the claim’s use of two open terms: “comprising” and “group of.” *Id.* at 1372.

2. Analysis

Although the '450 Patent does not recite a *Markush* group, *Gillette* is applicable to the case at hand because the Federal Circuit held that accused products may have a larger numerical quantity of recited components than those that actually are recited in the claim. *See Gillette*, 405 F.3d at 1371; *see also Crystal Semiconductor Corp. v. TriTech Microelectronics Intern., Inc.*, 246 F.3d 1336, 1348 (Fed. Cir. 2001) (“In the parlance of patent law, the transition ‘comprising’ creates

a presumption that the recited elements are only a part of the device, that the claim does not exclude additional, unrecited elements.”).

The “said active elements” recited in the present claim must be present for infringement, but the claim is silent as to remaining active elements in the devices.

The Court accordingly finds that there is not a claim construction issue as to the term “said active elements” and reaffirms the prior agreed construction of “active elements” as “circuit elements that have gain or that direct current flow, e.g., transistors” adopted by the Court. Further, the Court holds that Plaintiff may map its infringement read of the claim to a subset of the active elements in the accused devices.

B. “cover”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
“lie over the surface of”	“cover in full the ‘active element’”

(Dkt. No. 250 at 3-6; Dkt. No. 251 at 3-6).

1. The Parties’ Positions

Both parties now urge the Court to construe the term “cover” as an *O2 Micro* issue. Plaintiff argues that “as a matter of plain grammar and language, the transitive verb ‘cover’ captures ‘to lay or spread something over’ and ‘to appear here and there on the surface of.’”¹ (Dkt. No. 250 at 4).

Plaintiff further contends that the claim language bolsters its construction:

an insulation film formed over said substrate so as to cover said active elements, said insulation having at least one contact hole;

¹ Citing Definition of “Cover” in Webster’s English Dictionary, available at: <https://www.merriam-webster.com/dictionary/cover>; <https://dictionary.cambridge.org/us/dictionary/english/cover> (“to lie on the surface of something”).

at least one first electrode **formed on said insulation film so as to cover said active elements**, and connected to said active elements through said at least one contact hole, said at least one first electrode being made of a material which shields visible light; **an organic electroluminescent layer** having an organic electroluminescent material **formed on said at least one first electrode so as to cover said active elements**; and at least **one second electrode formed on said organic electroluminescent layer which covers** said active elements

(Dkt. No. 250 at 4, citing '450 Patent at 17:54-18:3) (emphasis added).

Plaintiff argues that Samsung's construction relies on the premise that total coverage is required to block out light from the active elements. (*See* Dkt. No. 250). However, the specification and Samsung's expert clarify that the insulation film, second electrode, and EL layer do not shield light. (*See* Dkt. No. 250 at 4-5). Also, in connection with the phrase "formed over," the term "cover" must mean to lay over on the surface of something. (Dkt. No. 250 at 5). The intrinsic record similarly describes these components—for example, the background describes a problem of a limited EL layer in which thin film transistors are not located, and therefore the ratio of the light emitting area to the pixel area is small. (*Id.*, citing '450 Patent at 2:32-37). The solution was to form the EL layer on the transistor layer to open up surface area. (*Id.*). The Abstract also uses "cover" in the context of cathode electrodes "formed above" the transistor layer. (*Id.*, citing '450 Patent at Abstract).

In an office action, the patentee described a set of first electrodes, an EL layer, and a second electrode covering a selection transistor and drive transistor, whereby light emission was realized at most of an area. (Dkt. No. 250 at 5-6). The office action described the layers of the first electrode, EL layer, and second electrode "placed above the active elements so as to cover the active elements." (Dkt. No. 250-1 at 303).

Solas cites *Pioneer Corp v. Samsung SDI Co., Ltd.*, 2007 WL 5688764 at *31-34 (E.D. Tex. Dec. 27, 2007), as a prior example of this Court construing the term "cover" to mean less

than total coverage. (Dkt. No. 250 at 6). Solas argues that Samsung's arguments based on the purpose of the invention are not legally sound. (*Id.*, citing *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1365 (Fed. Cir. 2001). Samsung's own expert admitted that "'cover said active elements' does not require shielding visible light." (Dkt. No. 250-2 at 76:6-79:24).

Defendants argue the Summary of Invention explains that the purpose of the invention is "to provide a display apparatus which prevents light from entering active elements such as transistors, to thereby avoid the malfunctioning of the active elements. (Dkt. No. 251 at 4, citing '450 Patent at 3:4-7). "In the display apparatus, the at least one first electrode is formed so as to cover the active elements," and "[s]ince the at least one first electrode is made of a material which shields visible light, the light emitted by the electroluminescent layer does not enter the active elements, and therefore the active elements do not malfunction due to the light." (*Id.*, citing '450 Patent at 3:28-46). Samsung argues that "claim terms should be construed consistent with the 'clear purpose of the invention.'" (*Id.*, citing *Cordis Corp. v. Medtronics Ave., Inc.*, 511 F.3d 1157, 1179 (Fed. Cir. 2008); *Reinishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

Samsung contends that in every embodiment, the active elements are completely covered by the first electrode—acknowledged by Solas's expert Mr. Credelle. (*Id.* at 4-5, quoting Dkt. No. 251-2 at 103:8-9). The specification repeatedly takes "cover" to mean total coverage. Because cathode electrodes are "easily oxidized," "the dielectric film 18 is formed so as to cover the cathode electrodes," and thus the covered electrodes "are not exposed to the air." (*Id.* at 5, citing '450 Patent at 11:37-42). Since oxidization would occur with partial coverage, this must mean total coverage. The specification includes other similar examples. (*Id.*, citing '450 Patent at 5:45-48, Fig. 2; 14:35-37, Fig. 18).

When the specification does refer to covering less than all of an object, it uses qualifiers. “Each cathode electrode 15 has an area and a shape...which are enough to cover the most part of one pixel area.” ’450 Patent at 6:32-36. “[T]he part except a projecting portion 40A is covered by the EL lower electrode 42.” *Id.* at 15:39-41.

Samsung argues that Solas’s interpretation would render the claims indefinite, because there is no disclosure of how much partial coverage is necessary. (Dkt. No. 251 at 6). Samsung also argues that, because the term “active elements” is not limited to transistors, it is unclear how much coverage would be needed for non-transistor active elements. (*Id.*).

2. Analysis

Both parties agree that the plain and ordinary meaning should apply to the construction of “cover.” “Properly viewed, the ‘ordinary meaning’ of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Phillips*, 415 F.3d at 1321. The parties also agree that every instance of the term “cover” should be construed the same way. (Dkt. No. 250 at 3).

First, looking to the language of Claim 1, the recitation of “an insulation film formed over said substrate so as to cover said active elements,” “an organic electroluminescent layer . . . formed on . . . so as to cover said active elements,” and “at least one second electrode formed on . . . which covers said active elements” indicates that “cover” applies more broadly than just the first electrode “covering” the active elements. *See* ’450 Patent at 17:53-18:3. Additionally, the claim language “formed over” weighs toward a construction that these layers lie over the surface of the active elements.

Second, looking to the specification, it is further borne out that the term “cover” need not require full coverage. In the Background of the Invention section, the ’450 Patent states that prior to the invention “the light emitting area of each pixel in which a part of the organic EL layer 106

is located is limited to an area in which the thin film transistors T1 and T2 are not located, and therefore the ratio of the light emitting area to the pixel area is small.” ’450 Patent at 2:33-37. It is true that in the Summary of the Invention, the patent does say that “[s]ince the at least one first electrode is made of a material which shields visible light, the light emitted by the electroluminescent layer does not enter the active elements, and therefore the active elements do not malfunction due to the light.” *Id.* at 3:42-46. However, if the first electrode is singled out as the element that must shield light, it is not the case that the electroluminescent layer, insulation film, or second electrode must perform that task—and indeed, the specification does not say that they do. It therefore cannot be the case that “covering” the active elements means full coverage in order to shield light.

In a preferred embodiment, “[t]he selection transistors Q1 and the drive transistors Q2 are formed under the cathode electrodes, . . . an organic EL layer 16 is formed on the cathode electrodes 15 and the interlayer insulation film 14, and a transparent anode electrode 17 . . . is formed on the organic EL layer.” *Id.* at 6:37-43. “The cathode electrodes 15 are formed of MgIn which reflects light. Therefore, the light emitted by the organic EL layer 16 . . . comes out through the anode electrode 17 without leaking downward . . .” *Id.* at 8:49-54. This preferred embodiment therefore does not require that any element besides the first electrode perform any light-blocking function.

Next looking to the prosecution history, the patentee stated that “since a set of first electrodes, an organic electroluminescent layer and a second electrode for one pixel cover a selection drive and a drive transistor, light emission is realized at most of an area . . .” (Dkt. No. 250-1 at 301). To distinguish from the prior art, the patentee also pointed to the disclosure of “the specific layer formation order . . . and the arrangement of the first electrode, the organic

electroluminescent [sic] layer and the second electrode *which are placed above* the active elements *so as to cover* the active elements” (*Id.* at 305) (emphasis added).

Furthermore, Samsung’s own expert, Dr. Adam Fontecchio, admitted in his deposition that “[t]here’s no requirement that the EL layer shield light,” and that the claim “does not require” that the second electrode be made of a material that shields visible light. (Dkt. No. 250-2 at 76:6-11; 74:14-75:9).

Samsung argues that the purpose of the invention should be a factor in claim construction. However, in the absence of limitations recited in the claim language, claim terms are not ordinarily defined by the purpose of the invention. *Ecolab*, 264 F.3d at 1366; *but cf. Laitram Corp. v. Cambridge Wire Cloth Co.*, 863 F.2d 855, 858. Even if they were, the Court finds no inconsistency between what Samsung contends is the purpose of the invention, the first electrode blocking light, and the construction of “cover” as not requiring total coverage. There are elements of the claim that do not block light, yet are recited as “covering” the active elements: the insulation film, organic electroluminescent layer, and second electrode. ’450 Patent at 17:53-18:3.

The Court finds unavailing Solas’s argument that cases interpreting the same term as used in other patents should influence the Court’s construction in this case. *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1318 (Fed. Cir. 2005) (“A particular term used in one patent need not have the same meaning when used in an entirely separate patent, particularly one involving different technology.”).


The Court rejects the construction proposed by Defendants, that “cover” should be construed as “cover in full the active element.”

The Court accordingly hereby construes “**cover**” to mean “**lie over the surface of.**”

IV. CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the '450 Patent. The parties are **ORDERED** that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are **ORDERED** to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

So ORDERED and SIGNED this 22nd day of September, 2020.



RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE